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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,686	01/23/2004	Motoharu Tanizawa	5000-5141	9107
27123	7590	11/02/2006		
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			EXAMINER IP, SIKYIN	
			ART UNIT 1742	PAPER NUMBER
DATE MAILED: 11/02/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/763,686	<b>Applicant(s)</b> TANIZAWA ET AL.	
	<b>Examiner</b> Sikyln Ip	<b>Art Unit</b> 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 7-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### Claim Rejections - 35 USC § 103

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3, 4, and 6-8 are rejected under 35 U.S.C. § 103 as being unpatentable over USP 4997622 to Regazzoni et al (col. 1, lines 5-35 and col. 8, lines 45-66) or USP 5073207 to Faure et al (PTO-1449, col. 1, line 40 to col. 2, line 5 and Col. 4, Table 1, Test No. 1).

Cited references disclose(s) the features including the claimed Mg based alloy compositions. Therefore, when prior art compounds essentially "bracketing" the claimed compounds in structural similarity are all known, one of ordinary skill in the art

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would clearly be motivated to make those claimed compounds in searching for new products in the expectation that compounds similar in structure will have similar properties. In re Gyurik, 596 F.2d 1012, 1018, 201 USPQ 552, 557 (CCPA 1979); See In re May, 574 F.2d 1082, 1094, 197 USPQ 601, 611 (CCPA 1978) and In re Hoch, 57 CCPA 1292, 1296, 428 F.2d 1341, 1344, 166 USPQ 406, 409 (1970). Therefore, it would have been obvious to one of ordinary skill in the art to select any portion of range, including the claimed range, from the broader range disclosed in a prior art reference because the prior art reference finds that the prior art composition in the entire disclosed range has a suitable utility. Also see MPEP § 2131.03 and § 2123. With respect to the instant claim 3 that the ratio is overlapped by the cited references because the claimed proportions of Al and Ca have been disclosed.

With respect to the Ca to Al ratio that the claimed proportions of Ca and Al are overlapped by said elements of cited references. Therefore, the ratio would have been overlapped. Furthermore, it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art, In re Cooper and Foley 1943 C.D. 357, 553 O.G. 177; 57 USPQ 117, Taklatwalla v. Marburg, 620 O.G. 685, 1949 C.D. 77, and In re Pilling, 403 O.G. 513, 44 F(2) 878, 1931 C.D. 75. In the absence of evidence to the contrary, the selection of the proportions of elements would appear to require no more than routine investigation by those ordinary skilled in the art. In re Austin, et al., 149 USPQ 685, 688.

With respect to the properties as recited in instant claim 4 which are material properties. Thus, it would have been inherently possessed by the material of cited

references. The product by process steps in instant claim 7 are no more than essential steps the required to form an alloy. Moreover, the invention defined in a product-by-process claim is a product, not a process. In re Bridgeford, 357 F. 2d 679, 149 USPQ 55 (CCPA 1966) and MPEP § 2113.

Claims 1, 3, 4, and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 09-271919 in view of USP 4997622 to Regazzoni et al.

JP 09-271919 in Table 1, inventive examples 1, 3, 4, 7, 12, and comparative examples 1 and 3 discloses claimed composition and Ca/Al ratio (also [0004]).

Solidus temperature as recite in instant claim 4 is material property; therefore, it would have been inherently possessed by material of cited reference. The casting steps in instant claim 7 read on injection and semimelting castings. Moreover, the invention defined in a product-by-process claim is a product, not a process. In re Bridgeford, 357 F. 2d 679, 149 USPQ 55 (CCPA 1966) and MPEP § 2113. It is the patentability of the product claimed and not of the recited process steps which must be established. See In re Brown, 459 F. 2d 531, 173 USPQ 685 (CCPA 1972). The guidance that has been provided by court on this matter is

[i]f the product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.

See In re Thorpe, 777 F.2d 695, 227 USPQ 964, 966 (Fed. Cir. 1985). When applicant's and prior art's products are to be identical or substantially identical, the burden shifts to applicant to provide evidence that the prior art product does not

inherently possess the claimed properties. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977); In re Fessmann, 489 F.2d 742, 745 180 USPQ 324, 326 (CCPA 1974); and In re Fitzgerald, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980).

JP 09-271919 does not disclose the grain size. However, Regazzoni in col. 8, lines 45-66 teaches fine grain would improve mechanical properties in the same field of endeavor or the analogous metallurgical art. Therefore, it would have been obvious to one having ordinary skill in the art of the cited references at the time the invention was made to produce fine grain Mg based alloy as taught by Regazzoni in order to improve/provide mechanical properties. In re Aller, et al., 105 USPQ 233.

### ***Response to Arguments***

Applicant's arguments filed April 27, 2006 have been fully considered but they are not persuasive.

Applicants' argument with respect to Regazzoni in page 6 of instant remarks is noted. But, "not necessary" does not mean "must be excluded". Moreover, there is no factual evidence that the claimed Mn content is critical and has unexpected result.

Applicants' argument with respect to Faure in pages 6-7 of instant remarks is noted. But, Zn and REM are optional elements in Faure. It is well settled that omission of an element and its function where not needed is obvious. Ex parte Rainu, 168 USPQ 375 (PTO Bd. of App. 1969) and In re Karlson, 136 USPQ 184 (CCPA 1963). With respect to the instant recited Mn content that there is no factual evidence that the claimed Mn content is critical and has unexpected result.

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Applicants argue in page 6, second full paragraph of instant remarks that Regazzoni fails to disclose the claimed Mg-Al-Ca-Mn composition. But, applicants fail to point out which recited element has not been disclosed by said reference.

Applicants' argument as set forth in page 6, third full paragraph of instant remarks is noted. But, metal grains or pellets are starting materials before cast

[0011]

[Mode for carrying out the invention] The entire configuration of the making machine 1 used for the half-melt molding method and injection-molding method which start this invention at drawing 1 is shown. By the shaping method of this invention, the Magnesium alloy metal grain produced by methods, such as a mechanical cut, by the hopper 8 in drawing or the raw material 3 of a pellet (3mm or more of diameters) is thrown in. A raw material 3 is supplied in a cylinder 4 through the pass gate 7 of the argon atmosphere from a hopper 8. Within this cylinder 4, while a raw material 3 is ahead sent on a screw 2, it is heated. 10 shows this heating zone. Cooking temperature will be in the semi molten state in which solid phase and the liquid phase were intermingled as it was illustrated at the temperature below a liquidus, although the Magnesium alloy raw material 3 would be in the molten state in an abbreviation liquidus. Moreover, as for the Magnesium alloy in a semi molten state, the

(state in an abbreviation liquidus). Their sizes do not control grain size in the final product.

## Conclusion


Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. § 1.121.

## Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (571) 272-1241. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (571)-272-1244.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

  
SIKYIN IP  
PRIMARY EXAMINER  
ART UNIT 1742

S. Ip  
October 29, 2006